

REMARKS

Claims 13, 14, 15, 26, 27, 40 and 41 have been amended to correct obvious typographical errors. Applicants wish to thank the Examiner for bringing these errors to their attention. No new matter has been added

Rejection under 35 U.S.C. § 103

Claims 1, 6, 8, 9, 12-15, 20, 22, 25-27, 29, 34, 36, and 39-41 were rejected under 35 U.S.C. § 103 as being unpatentable over *Doi*, EP 1138746 (“*Doi*”). Applicants respectfully traverse this rejection.

Doi relates to a fluorescent polymer having at least some repeat units having branching polymeric chains. The patent lists 18 formulae for main chain and branching units/monomers with 26 different “Ar” groups. Ar can be a “group containing a metal complex having, as a ligand, one or more organic compounds containing 4-60 carbon atoms” in the main chain (Ar₁, Ar₆, Ar₈ - Ar₁₆, Ar₁₈, Ar₁₉, Ar₂₂, Ar₂₃, Ar₂₅, and Ar₂₇) or a branching polymeric chain (Ar₁₄, Ar₁₇, Ar₂₀, Ar₂₁, and Ar₂₆). The other Ar groups are arylene or heterocyclic groups, not groups containing a metal complex. In all of these instances, the metal complex is a monomeric unit in a polymeric chain. In contrast to *Doi*, in Applicants’ invention, the metal is coordinated to a functional group which is attached to a polymeric backbone and the metal complex is not a monomeric unit within a polymeric backbone chain.

Furthermore, Applicants can find no teaching of pending Claim 1’s first-type inert spacer group in *Doi*. While the Examiner has cited paragraph 20, Applicants respectfully submit that this does not teach a first-type inert spacer group. Applicants submit that the discussion beginning at line 52 (page 15) of paragraph 20, refers to substituent groups, not linking groups. For example, “cyano” is one of the groups listed, and it certainly is not a linking group. And the term “aryl” refers to a substituent, whereas the term “arylene”, used elsewhere in *Doi*, refers to a linking group. In addition, many of the groups listed are fully conjugated and could not function as an inert spacer group even if they were to be used as a linking group. Absent the teaching of Applicants’ claims, one of ordinary skill in the art would have no way of knowing to choose a linking group nor of knowing that such a group should be an inert spacer group.

Finally, the Examiner has pointed to page 11 of *Doi*, as teaching hydroxyquinoline as a first-type functional group. Applicants’ respectfully disagree. Chemical formula 44 on page 11, includes some quinolines. Applicants can see no evidence of a hydroxyquinoline in formula 44 as none of the “Rs” in formula 44 may be an OH⁻ substituent. Furthermore, formula 44 is listed as an example of a heterocyclic compound that can be used as Ar₁ to Ar₇. Of this group, Ar₁ - Ar₇, only Ar₁ and Ar₆ can be a group containing a metal complex, and they are polymerized in the backbone of the main chain of the polymer. Thus, they are not attached to a first-type inert spacer group, as recited in the present claims.

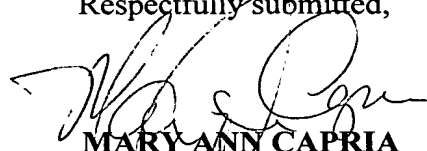
In view of all of the above distinguishing aspects differentiating the pending rejected claims from *Doi*, Applicants submit that not only does *Doi* fail to exemplify a polymeric metal complex composition of the pending claims, *Doi* does not teach the required components. Thusly, it would not have been obvious to form the compositions of the pending claims in view of the teachings or suggestions of *Doi*.

Applicants respectfully request that the rejection under 35 U.S.C. § 103 be withdrawn.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that Claims 1, 6, 8, 9, 12-15, 20, 22, 25-27, 29, 34, 36, and 39-41 are now in condition for allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,



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